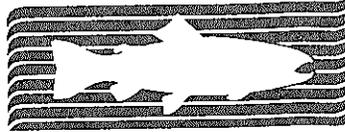


Organizations and Nonprofit Organizations



KEEPER OF THE STREAMS

May 13, 2002

Curtis Knight
California Trout, Inc.
PO Box 650
Mt. Shasta, CA
96067

Mr. Russ Kanz
State Water Resources Control Board
Division of Water Rights
PO Box 2000
Sacramento, CA 95812-2000

Re: DEIR Comments on Farad Dam Replacement Project, Truckee River

Dear Mr. Kanz, *RSS*

CalTrout supports the no project alternative based on the impacts documented in the Draft Environmental Impact Report (DEIR). The no project alternative best meets the state and federal goals and objectives for the Truckee River. The Project produces a minimal amount of power resulting minimal benefit at the cost of the ecological integrity of the Truckee River. Even without the Farad Dam project, Sierra Pacific can utilize its Truckee River water rights using other existing downstream diversions.

5-1

CalTrout is concerned about project impacts on the US Fish and Wildlife Service's (USFWS) Lahontan cutthroat trout recovery effort. Much planning and research is currently taking place to develop an updated recovery plan for the federally threatened Lahontan cutthroat trout. Many of the recovery projects being discussed involve improving fish passage and providing adequate instream flows. The rebuilding of the Farad Dam in light of these efforts is inappropriate and is a step backwards in the recovery efforts of Lahontan cutthroat trout, even in light of the proposed ease of fish passage for the Farad Project.

5-2

Minimum Instream Flow

CalTrout supports the no project alternative with no diversions from the river. However, should the project be approved we have concerns about the 1996 IFIM model used by the Department of Fish and Game (DFG).

5-3



IFIM studies in general have come under increasing criticism to the point where some researchers have suggested no scientifically defensible method exists for defining instream flow needs to protect particular species of fish or aquatic ecosystems¹. In light of this information regarding the inadequacy of IFIM studies, CalTrout requests that additional information be collected before recommendations regarding instream flows in the Farad bypass reach.

5-3
cont'd

Kondolf et al. (2000) suggest that 2-D modeling can produce reasonable estimates of the amount of habitat given combinations of depth and average velocity compared to more often used 1-D models, such as a HEC-2 model. One-dimensional models typically assume that the channel is straight, with all flow perpendicular to the cross section, and that the flow is either uniform or gradually varied. Realizing the limitations of the one-dimensional approach, two-dimensional models have been shown to better simulate the flow of water in fish habitats.²

The amount of data collected for 2-D models is typically less than for 1-D models as 2-D models do not require velocity measurements, except for model verification. The 2-D model does, however, require topographic data and information about channel roughness. The 2-D model views the stream as a continuum and does not pose rigid restrictions on locations of field data points. More data is collected along the stream and not at specific transects, resulting in a more accurate and more complete representation of the study reach³.

5-4

It should be noted, however, that statistical and modeling approaches to determining a proper flow regime should not be a substitute for sound biological understanding. Conceptual, qualitative models incorporating life-history attributes for all life stages of native aquatic organisms, especially threatened Lahontan cutthroat trout, should be taken into account⁴. Hydraulic modeling and biological inquiries should be considered separate tasks to avoid the appearance that models are providing answers rather than further insight and aids to thought.

- Caltrout recommends a review of the IFIM data and the consideration of other modeling techniques such as 2-dimensional modeling.

¹ Castleberry, D.T., J.C. Cech, D.C. Erman, D. Hankin, M. Healey, G.M. Kondolf, M. Mangel, M. Mohr, P.B. Moyle, J. Nielsen, T.P. Speed, and J.G. Williams. 1996. Uncertainty and instream flow standards. *Fisheries* 21(8):20-21.

² Leclerc, M., A. Boudreault, J. A. Bechera, and G. Corfa. 1995. Two dimensional hydrodynamic modeling: a neglected tool in the instream flow incremental methodology. *Transactions of the American Fisheries Society* 124:645-662.

³ Ghanem, A, P. Steffler, F. Hicks, and C. Katopodis. 1996. 2-D hydraulic simulation of physical conditions in flowing streams. *Regulated Rivers: Research and Management* 12:185-200.

⁴ Stanford, J.A. and six others. 1996. A general protocol for restoration of regulated rivers. *Regulated River: Research and Management* 12:391-413.

Putting aside our concerns regarding methodology and taking into account DFG's modeling results, the mitigated minimum flows of 150 cfs are not the optimum flows predicted by the model. At the very least the optimum flows predicted by the model should be implemented. These minimum flows range from 200 to 250 cfs depending on species and life stage.

5-5

- If the project is approved and no additional models of instream flow are conducted, CalTrout recommends minimum flows of 250 cfs in the bypass reach.

Further, the model focuses on rainbow and brown trout. CalTrout recommends any instream flow model be focused on Lahontan cutthroat trout. While results may be similar, any advantage, however slight, afforded Lahontan cutthroat trout over introduced species could prove beneficial to recovery efforts.

5-6

Out of Season Recreation Flows

CalTrout does not support spiked flows that would occur outside of the season in which these flows would have occurred naturally. Figure 3-5 showing the hydrograph of the Truckee River in wet, normal and dry years indicates that peak runoff flows occur March through June. CalTrout believes whitewater boating opportunities exist during these months, with or without the project, and should be adequate to meet the State Water Resources Control Board's (SWRCB) beneficial use requirement. Any out of season base flows have the potential to impact fish and macroinvertebrates. These flows will without question have an impact on recreational fishing, also a beneficial use of the SWRCB basin plan. There is no justification for promoting one beneficial use at the expense of another.

Sudden increases in water levels associated with whitewater flows and regulated rivers can have deleterious impact on native biota that have not adapted to such conditions. Mitigation 9-1 acknowledges "that fluctuations of flow once or twice a month could affect invertebrates and fish, and this effect cannot be predicted." Indeed, such flow fluctuations have been shown to have impacts on fish, especially early life stages when fish are most vulnerable (see below). Yet, mitigation measure 6-5 mentions nothing about monitoring for fish stranding.

5-7

- CalTrout recommends that presence and stranding of fry and juvenile salmonids be monitored before, during, and after any implementation of out of season peak flows.
- CalTrout recommends that the effects of ramping rates specifically focus on the short period of time when trout emerge from the gravel, noting that this changes slightly from year to year depending on water temperature.

Ramping rates

Research on the flow fluctuation management denotes the importance of ramping rates. In the absence of supporting research it has been recommended that rates of change

5-8

should be managed so the daily rate of change (both ascending and descending limbs of the hydrograph) be no more than 10% of the previous day's flow.⁵

Fish stranding should be evaluated for all fish and all life stages. Of particular concern to CalTrout is the effect ramping flows have on early life stages of fish. Salmonids are especially vulnerable during their first months upon emerging from the gravel as they search for adequate habitat and food resources. Elliott (1994)⁶ terms the first several months following emergence as the 'critical period of survival' for salmonids. During this brief time, abundance, mortality, and metabolic rates are at their highest resulting in large fluctuations of year class abundance during a short period of time (Knight et al, 1999)⁷. Large reduction in rearing flows could have a large impact on the successful recruitment of salmonid species and could potentially compromise recovery efforts of Lahontan cutthroat trout.

5-8
cont'd

- CalTrout recommends that the daily rate of change of streamflows not exceed 10% of the previous days flow.

Water Temperature

CalTrout would like to know how the project affects the daily temperature regime. For example, we would like to see hourly temperature data for unimpaired flows compared to modeled impaired flows of 150 cfs. We predict that one of the benefits of the unimpaired flow regime would be reduced daily fluctuations in temperature and reduction of hourly maximums.

5-9

- CalTrout requests hourly temperature data for unimpaired flow and modeled hourly temperature data for recommended bypass flows.

Mitigation Measure 6-4 is inadequate. The two-year study period is not long enough to account for a variety of water years that so greatly influence maximum stream temperatures. Temperature monitoring should be done throughout the life of the project. It is relatively inexpensive and temperature is often the driving variable for most aquatic organisms.

5-10

- CalTrout recommends hourly temperature data be monitored for the life of the project.

⁵ See Hill and Platts at footnote 11.

⁶ Elliott, J.M. 1994. Quantitative Ecology and the Brown Trout. Oxford University Press, London.

⁷ Knight, C.A. R.W Orme, D.A Beauchamp. 1999. Growth, survival, and migration patterns of juvenile adfluvial Bonneville cutthroat trout in tributaries of Strawberry Reservoir, Utah. Transactions of the American Fisheries Society 128:553-563.

This concludes our comments. If you have any further questions please contact me at (530)926-3755 or by email at caknight@jps.net.

Sincerely,

A handwritten signature in black ink, appearing to be 'Curtis Knight', written in a cursive style.

Curtis Knight
Area Manager

Response to Comment Letter Number 5

Response to Comment Number 5-1

Please see Master Responses Alternative 1, Need 1 and Cost 2.

Response to Comment Number 5-2

Comment noted. The proposed project provides measures to ensure fish passage and fish passage monitoring. No changes are required for the Final EIR.

Response to Comment Number 5-3

Please see Master Responses Fish 2 and Alternative 1.

Response to Comment Number 5-4

No additional modeling is proposed as part of the analysis of the project or for the Final EIR. The conclusions in the Draft EIR were based on the best available science (including IFIM, and professional judgement) for species occurrence, habitat availability and suitability. The SWRCB is confident that this information provides a strong basis for assessing effects on aquatic resources. Please see Master Response Fish 2.

Response to Comment Number 5-5

Please see Master Response Fish 3.

Response to Comment Number 5-6

This information would be useful to maximize future habitat values for Lahontan cutthroat trout, but is not currently in preparation or available. Please see Master Response Fish 1.

Response to Comment Number 5-7

Please see Master Response Fish 4.

Response to Comment Number 5-8

Please see Master Response Fish 4.

Response to Comment Number 5-9

Figure 4-1 of the Draft EIR shows the average diurnal temperature variation (including maximum, minimum, and mean) for various flow scenarios including 150 cfs. This figure shows that the project will cause an increase in diurnal temperature fluctuation as CalTrout suggests, but as seen in the figure, this increase is small. Providing hourly temperature data would not change the overall conclusions in the Draft EIR.

Response to Comment Number 5-10

Please see Master Response Water Quality 2.

Friends of the River's Farad Dam DEIR Comments ~ May 13, 2002 Page
Frie
nds of the River

915 20th Street ~ Sacramento, CA ~ 95814

May 13, 2002

Mr. Russ Kanz
State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Re: Farad Diversion Dam Replacement Project

Dear Mr. Kanz:

Thank you for inviting public comment concerning the Farad Diversion Dam Replacement Project Draft Environmental Impact Report (DEIR).

The proposal to replace the Farad dam represents a once in a lifetime opportunity to restore an important segment of the Truckee River.

The original Farad hydroelectric dam was destroyed in the 1997 flood. The dam formerly diverted most of the water from the river for nearly two miles. The diversion degraded fish and aquatic habitat, and reduced angling, whitewater boating, and other recreational opportunities. Since the flood removed the dam, the Truckee River has largely restored itself and now provides excellent fish and aquatic habitat, as well as outstanding opportunities for angling and boating.

The Sierra Pacific Power Company proposes to rebuild the Farad hydro dam, even though the Farad project produces a nearly insignificant amount of energy from a statewide perspective. Even without the Farad dam, Sierra Pacific can utilize its Truckee River water rights to generate hydroelectricity and provide consumptive water supplies by using other existing downstream diversions. We therefore do not believe that it is in the public interest to rebuild the dam.

6-1

Friends of the River supports the "No Project" alternative. Not rebuilding the Farad diversion dam best meets state and federal goals and objectives for the Truckee River. These objectives include protecting and restoring water quality as required by the state Porter-Cologne Act and the federal Clean Water Act. Water quality objectives include providing optimum flows for fish, aquatic habitat, recreation, and other beneficial uses.

6-2

Not rebuilding the dam would also best meet the mandate of the Endangered Species Act and the current restoration plan for the threatened Lahontan cutthroat trout. In addition, retaining the free flowing nature of this particular segment of the Truckee River would preserve public trust values guaranteed by the California Constitution.

If the Water Board should choose to permit the reconstruction of the Farad dam, the following mitigation measures should be required:

6-3

- FISH FLOWS ~ Require minimum fish flows of 200-250 cubic feet per second (cfs) instead the proposed 150 cfs. Biologists consider 200-250 cfs to be optimum fish flows for this segment of the Truckee River (DEIR pg. 6-10). These higher minimum flows are particularly important

for the restoration of native fish such as the threatened Lahontan cutthroat trout. We believe that the Water Board's responsibilities under the Clean Water Act and the public trust doctrine of the California Constitution require higher minimum flows to restore and protect fisheries and other beneficial uses.

6-4
cont'd

- **WHITEWATER RECREATION FLOWS** ~ The proposal to provide whitewater recreation flows one weekend per month from April to September should only be implemented if the Water Board has the resources to monitor the impacts of such flows on fisheries and the aquatic ecosystem, and the ability to adjust flows in the future to mitigate potential impacts. We recommend that Sierra Pacific be required to fund all monitoring and future adaptive management actions, but that the monitoring be conducted by the Water Board or by its independent designee (not Sierra Pacific).

6-5

- **RAMPING FLOWS** ~ We support the ramping flows proposed in the DEIS to mitigate the impact of flow changes in the affected segment.

6-6

- **BOAT & FISH PASSAGE** ~ We support the proposal to design the dam in a manner that provides for safe boating and fish passage over the dam.

6-7

- **PUBLIC ACCESS** ~ Providing public access around the diversion dam for boaters who do not wish to boat over the dam is essential. Sierra Pacific should be required to obtain an easement, and the Water Board should intercede with the California Department of Transportation and Nevada County if necessary, to obtain an easement to ensure public access around the dam.

6-8

In addition, we have the following concerns and comments in regard to the DEIR:

- All proposed mitigation measures relative to water quality should be a condition of the Clean Water Act section 401 permit.

6-9

- The DEIR apparently fails to consider and analyze a diversion scenario providing a minimum fish flow of 200-250 cfs as recommended by the best available science and as outlined in the DEIR (DEIR pgs. 4-17 and 6-10).

6-10

- We could find no reference in the DEIR to any apparent consultation with the U.S. Fish & Wildlife Service, which is responsible for the protection and restoration of the threatened Lahontan cutthroat trout under the federal Endangered Species Act.

6-11

Again, we appreciate the opportunity to comment on this important project and document. Please inform us of any decision the Water Board makes concerning this project. Thank you for your consideration.

Sincerely,

Steven L. Evans
Conservation Director

Response to Comment Letter Number 6

Response to Comment Number 6-1

Please see Master Response Need 3.

Response to Comment Number 6-2

Please see Master Responses Need 1 and Need 2.

Response to Comment Number 6-3

Please see Master Responses Alternative 1 and Fish 3.

Response to Comment Number 6-4

Please see Master Response Fish 3.

Response to Comment Number 6-5

Please see Master Response Fish 4. Parties responsible for mitigation monitoring will be identified in the Mitigation Monitoring and Reporting Plan. Sierra Pacific Power, or future owner of the dam will be responsible for funding any additional studies or monitoring. Mitigation Measure 6-3 has been modified to allow adjustment of flows for Lahonton cutthroat trout based on scientific justification.

Response to Comment Number 6-6

Comment noted.

Response to Comment Number 6-7

Comment noted.

Response to Comment Number 6-8

Please see Master Response Recreation 2.

Response to Comment Number 6-9

Issuance of the water quality certification would legally require the applicant to apply the mitigation measures set forth in the CEQA findings for the project.

Response to Comment Number 6-10

Project effects on physical habitat availability for all rainbow and brown trout life stages were analyzed for bypass flow scenarios of 60 cfs, 100 cfs, 150 cfs, 200 cfs, and 250 cfs (page 6-16 and table 6-3).

Response to Comment Number 6-11

The USFWS' field office in Reno did not reply to telephone calls requesting input on the project during preparation of the EIR. The Corps is currently consulting with the USFWS under Section 7 of the ESA.

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May 13, 2002

VIA HAND DELIVERY

Mr. Russ Kanz
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812

**Re: Sierra Pacific Power Company Comments on Draft Farad Diversion
Dam Replacement Project EIR**

Dear Mr. Kanz:

This firm represents the Sierra Pacific Power Company ("SPPC") with regard to the replacement of the Farad Diversion structure destroyed in a flood on January 1, 1997. SPPC has asked us to review the Draft Environmental Impact Report ("EIR") prepared for the project. We submit the following comments on behalf of SPPC.

GENERAL COMMENTS

We recognize that considerable effort has been spent on this document. Overall, the project description is accurate and the EIR does an adequate job describing the project's environmental impacts. Our comments will focus on our concerns about the document; we hope that our concerns are addressed in the Final EIR.

7-1

The Farad Diversion is a Replacement Project

An overarching concern with the EIR is that it does not adequately account for the fact that the proposed project replaces a diversion that has been in place on the Truckee River since 1899. Moreover, the proposed project design itself mitigates many of the potentially significant effects of the project, making the imposition of further mitigation measures unnecessary. The Draft EIR, however, does not recognize the mitigation of environmental impacts provided by the design itself and requires additional mitigation

7-2

measures. Some of these mitigation measures are either unnecessary for the purposes of mitigating an impact below the level of significance, or they are infeasible. Thus, the mitigation measures are not required by the California Environmental Quality Act. (Pub. Resources Code, § 21000 et seq. (“CEQA”)).

7-2
cont'd

SPPC objects to the methodology used in the DEIR, which consistently overstates project impacts, and therefore requires onerous mitigation measures that go well beyond what is required by CEQA. As stated on page 2-3 of the DEIR, one of the project objectives is to keep maintenance and operation costs low. By requiring excessive mitigation, the maintenance and operation costs are much higher than they should be for this diversion replacement project.

7-3

The Draft EIR Relies on an Inappropriate Baseline

The EIR mistakenly relies on one baseline – the existing physical condition. Because the project has been in existence for over 100 years, the EIR should have compared the proposed project with the former diversion in addition to no diversion at all. While it is true that the baseline is normally the condition that existed at the time of filing the NOP (CEQA Guidelines, § 15125), the use of two baselines would be appropriate in this case. An additional baseline of the diversion structure that existed prior to washout would show that the proposed project is a significant improvement over the prior design. The use of an additional baseline is advisable to provide the public and decision makers with a realistic assessment of the proposed project’s environmental impacts.

7-4

The project should not be presented as though the water will be diverted to produce power for the first time. The project, as mitigated in the Draft EIR, will provide many more environmental and other benefits than the prior design. We have provided a table (Attachment A), showing the differences between the old diversion dam and the proposed replacement diversion structure. This chart, or one like it, should be included in the Final EIR so that the public will be apprised of the improvements in the design proposed by SPPC.

7-5

The Environmental Review Should Focus on Impacts to the Environment

As lead agency, SWRCB must consider the environmental impacts of the project. This responsibility is different from SWRCB’s principal duties as a permitting agency that addresses water rights and water quality issues. SWRCB plays a unique role in the Section 401 certification, for example, which requires a balancing of beneficial uses. As lead agency for the project, however, the SWRCB should ensure that the analysis in the EIR focus on the

7-6

project's impacts to the physical environment as mandated by CEQA. Thus, the EIR must analyze environmental impacts, not impacts to other beneficial uses.

7-6
cont'd

Some mitigation measures proposed in the Draft EIR, particularly in the Recreation Chapter, indicate that the SWRCB has confused its role as a lead agency for the purposes of this project with its role as a permitting agency in other projects. In the case of Recreation, for instance, the imposition of the mitigation measures imposed to provide recreational opportunities, have the potential to cause additional impacts. These additional impacts are not discussed in the Draft EIR, contrary to the mandate of CEQA. (See CEQA Guidelines, § 15126, subd. (c); see also *Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986, 995-996.) Our specific comments on the Recreation Chapter explain this problem in more detail.

7-7

DESCRIPTION OF PROJECT ALTERNATIVES (Chapter 2)

The preliminary restoration plan for the proposed project is mentioned on page 2-15 of the Draft EIR. Appendix D contains this preliminary plan. While Chapter 2 mentions that the plan's objective is to "stabilize the river banks using vegetation," other methods of stabilization will be necessary. The plan in Appendix D conflicts in some instances with the construction drawings in that some restoration areas require, in place of vegetation, grouted in rocks or boulders for bank stabilization because of the velocity of the River and side slopes. Vegetative restoration will occur wherever possible to stabilize slopes and will result in more erosion control than currently exists in the area. Restoration work that needs to occur on CalTrans property will require cooperation from CalTrans to complete.

7-8

IMPACTS ON WATER QUALITY (Chapter 4)

Erosion on river left is an existing problem that has occurred for many decades which affects water quality. This chapter should acknowledge that the design of this project, in particular, the conduit on river left will prevent further erosion of river left. This has the potential to improve water quality and is an example of SPPC's effort to design mitigation into the project to improve on the existing setting.

7-9

IMPACTS ON AQUATIC RESOURCES (Chapter 6)

Fish Bypass Flows Cut Into SPPC's Water Rights

Under SPPC judicially decreed water rights, SPPC can divert sufficient water from the River to provide 400 cfs (after transportation loss) to the turbine wheels located at the

7-10

Farad Power House for the generation of electric power. Up to the date the diversion was washed out, SPPC bypassed 50 cfs for fish. This is the amount SPPC originally proposed to bypass for the replacement project. Under Mitigation Measure 6-3, SPPC must bypass at least 150 cfs for fish.

The Rainbow and Brown trout have been emphasized in this EIR. Fisheries managers in the Farad reach have focused on managing the River for these species. Fisheries studies conducted in this reach of the River in the future, could result in different conclusions regarding the necessary flows for the Lahontan Cutthroat Trout ("LCT"). (See Letter of Jay Kidder, Chinook Engineering, Attachment B.) The 150 cfs may not be necessary, and in fact, could be too high at certain times of the year for this species. If studies are eventually conducted in this reach of the River for LCT, and if they show that LCT do not require 150 cfs, the flow mandated by Mitigation Measure 6-3 should be reduced by an amount agreed to by the Department of Fish and Game. Moreover, because other hydroelectric projects on the River must bypass only 50 cfs instead of 150 cfs, SPPC should be able to reduce the 150 cfs flow if future studies support it. Thus, Mitigation Measure 6-3 should be revised to reflect this flexibility with regard to the minimum bypass flows.

7-10
cont'd

Loss of Power Generation Caused by Minimum Bypass Flows

The requirement to change the bypass flow from 50 cfs to 150 cfs results in a significant loss of power generation. Using Appendix F of the Draft EIR, SPPC calculates a loss of 1,892 megawatt ("MW") hours because of this mitigation measure.

This loss should be discussed in the Draft EIR in more detail. The reduction in power generation from this existing hydroelectric plant has more implications than the financial loss to SPPC. The cost to the environment from the loss of clean energy is significant. To replace the 1,892 MW hours that could be produced by hydroelectricity with fossil fuels results in the equivalent of more than 150,000 gallons of diesel fuel, or almost 19 billion cubic feet of natural gas, or more than 1.5 million pounds of coal. This affects air quality as well as the State's efforts to establish adequate energy supplies from renewable energy sources. More information on these issues is covered below in the comments regarding the Recreation Chapter of the Draft EIR. In summary, any loss of energy production capacity at this power plant results in negative impacts, especially since the hydroelectric generating facility already exists.

7-11

Ramping Does Not Adequately Mitigate Impacts of Mitigation Measure 9-1

Under Mitigation Measure 9-1,¹ SPPC will be unable to divert any water for power generation during certain conditions in order to provide increased recreational boating opportunities. Mitigation Measure 6-5 attempts to mitigate the effect Mitigation Measure 9-1 could have on fish. The ramping requirement will lead to disruptions of operations at least six days per month for SPPC. Even if SPPC implements this onerous requirement, SPPC is concerned that Mitigation Measure 6-5 will not adequately mitigate those impacts.

A ramping requirement is more appropriate for hydroelectric plants that are designed as peak load units. In these kinds of power plants, power generation fluctuates based on peak demand for electricity, altering the need for water diversion as the demand changes. The Farad plant is a base load unit, not a peak load unit, and therefore does not result in fluctuating power generation. As long as river flows remain adequate, SPPC will divert water for generation to the fullest extent possible. It will not be adjusting generation, which would cause fluctuating river flows. Fluctuating flows caused by the power plant would only occur on rare occasions, such as an unexpected maintenance problem. Thus, the main purpose of the ramping requirements in Mitigation 6-5 is to mitigate the impacts from the severe flow fluctuations that would be created by the imposition of Mitigation Measure 9-1.

7-12

As discussed in the letter from Chinook Engineering (see Attachment B), fluctuating river flows are harmful to fish and other aquatic species. Even with a ramping requirement, fluctuating flows should be discouraged as much as possible. Thus, if the mitigation measure requiring a change in flows (Recreational Weekend Flows / Mitigation Measure 9-1) is eliminated, then Mitigation Measure 6-5 would rarely need to be implemented.

IMPACTS ON RECREATION (Chapter 9)

SPPC is aware that recreational boaters have taken advantage of the fact that the diversion has not been in place over the past few years. Having invested in the Farad project over the last one hundred years, however, SPPC must replace the diversion dam so that the

7-13

^{1/} This comment refers to Mitigation Measure 9-1 on page 9-16 of the Draft EIR. For the purposes of this comment letter we will refer to it as "Recreational Weekend Flows / Mitigation Measure 9-1." The other Mitigation Measure 9-1 is on page 9-10. For the purposes of this discussion, we refer to the measure as the "Project Construction / Mitigation Measure 9-1." These mitigation measures should be re-labeled as Mitigation Measure 9-1a and 9-1b in the Final EIR.

existing Farad plant can continue generating power. The demand for electrical power generation continues to increase as the population of California grows.

With recreational uses in mind, SPPC decided to design the proposed project to accommodate use of the River by the recreational boaters. SPPC, thus hired McLaughlin Water Engineers, Ltd., to design the diversion with special features for boaters. Recreational considerations also contributed to the decision to propose a different location for the diversion structure from the original structure that washed out.

On page 9-12, the EIR refers to the special features of the project designed to accommodate boaters as "Operational-Related Impacts." It does not expand upon the features other than a short discussion in the next section on the boat/debris chute and the design that prevents an increased risk of entrapment. Instead of discussing the environmental impacts of the special features to accommodate boaters, the Impacts discussion launches into a discussion on the loss of boating opportunities.

As discussed below, this is an inappropriate discussion for an EIR. Nevertheless, if a background discussion about the effects of the project on boating opportunities is to be incorporated into the Recreation Chapter, then a more balanced approach is necessary. The Recreation Chapter should focus more on the measures already proposed in the design of the project that mitigate the impacts on boaters. The Recreation Chapter should explain more thoroughly the specific design features that make this replacement diversion different from the diversion that washed out, and different from any other diversion on the River.

The Recreation Chapter should explain, for example, that the "Park and Ride" wave exists only because SPPC decided to leave the old dam foundation in the river for the boaters, rather than remove it. It is not a natural feature. Furthermore, the counter weir for the proposed project is designed to maintain the flow pattern so that the water flow to the Park and Ride wave will not be restricted, again, in order to accommodate the kayakers.

In addition, the Recreation Chapter should more thoroughly explain the details of the proposed project design. McLaughlin Water Engineers designed the boat chute so that a new play spot is created below the boat chute. (Letter of Richard McLaughlin, McLaughlin Water Engineers, LTD, Attachment C) The new play wave will function concurrently with the existing Park and Ride wave at higher water flows, but it will also function for longer periods and at lower water levels than the current conditions needed for the Park and Ride wave. Thus, the design of the proposed project mitigates any perceived impact of the project on recreational boaters. No further mitigation is necessary.

Emphasis on Social Impacts is Inappropriate

The Recreation Chapter overemphasizes the impacts of the project on recreational boaters rather than focusing on the environmental impacts as required by CEQA. According to the introduction, the chapter “provides a description of recreation and recreational use in the affected environment and evaluates potential recreation impacts associated with project construction and operation.” (Draft EIR, at p. 9-1.) The Draft EIR states that “specifically, this analysis is concerned with impacts that would be caused by changes to river flow conditions and by disruption of recreational activities.” (Draft EIR, at p. 9-7.) The criteria for determining impact significance is “project-related operational or construction activities [that] would cause a substantial long-term disruption of any institutionally recognized recreational activities” or “project-related changes in river flows that would result in substantial changes in recreational opportunities . . . when compared with existing conditions.” (Draft EIR, at p. 9-9.) Suggested mitigation measures address the impact on boaters. The chapter should focus, instead, on the special design features of the project to accommodate recreational boaters and the impacts of these features on the environment.

7-14

The Draft EIR Uses Arbitrary Criteria and Threshold of Significance

The threshold and criteria in the Draft EIR for creating a significant impact with respect to recreation are arbitrary. No language in CEQA indicates that disruption of recreational activities automatically creates a significant effect on the environment. “Significant effect on the environment” is defined by CEQA as “a substantial, or potentially substantial, adverse change *in the environment*.” (Pub. Resources Code, § 21068 (emphasis added).)

Through CEQA, the Legislature has declared that the policy of the state is to “[d]evelop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.” (Pub. Resources Code, § 21001.) The definition of environment in CEQA focuses on “the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance.” (Pub. Resources Code, § 21060.5.)

7-15

This EIR establishes the threshold and criteria for creating a significant impact as the project’s effect on recreational boating. CEQA requires the threshold and criteria to focus on the physical environment. Recreational boating should not be substituted for the physical environment in an EIR.

The EIR Relies on “Old” Appendix G to CEQA

The recreational “impacts” described in the EIR and the suggested mitigation measures may have been applicable to this project under the previous Appendix G of the CEQA Guidelines, but such an analysis is no longer applicable given the 1998 revision to the CEQA Guidelines. The importance of the 1998 revisions is best realized by understanding the history of the Appendix G changes.

Prior to October 1998, Appendix G of the CEQA Guidelines provided a list of “Significant Effects.” A project would “normally” have a significant effect on the environment if it would conflict with established recreational uses of the area. Before May 1997, the identified impacts in the list were considered significant under a rebuttable presumption; that is, if a project caused one of the listed impacts, then the lead agency was faced with a rebuttable presumption that the impact was significant. (See *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1604.) In May 1997, the Resources Agency revised the wording in Appendix G so that the listed impacts “may be deemed significant.” This revision eliminated the rebuttable presumptions.

In October 1998, the Resources Agency repealed the Appendix G list and substituted the list with the current environmental checklist form that satisfies legal requirements for initial studies when used in conjunction with Appendix H of the CEQA Guidelines. In short, CEQA and the CEQA Guidelines no longer contain language that specifically deems conflicts with established recreational uses of the area as significant impacts on the environment.

Some case law supports the proposition that when a project conflicts with established recreational uses of the area, it automatically creates a significant effect on the environment. These cases, however, consist of decisions issued prior to the 1998 revisions in the CEQA Guidelines, and/or cite to the “old” Appendix G as the authority for this proposition. (See, e.g., *Baldwin v. City of Los Angeles* (1999) 70 Cal.App.4th 819, 842; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1417.) Even using the “old” Appendix G, if the EIR used the appropriate baseline, or the addition of another baseline for comparison purposes, it would be clear that recreational uses of the area have only supposedly become established since the diversion washed out.

The approach in the EIR relies on the analysis established under the “old” Appendix G of the CEQA Guidelines, rather than relying on the analysis provided under the current environmental checklist of the revised Appendix G. Pursuant to the revised Appendix G, the initial study limits its analysis of recreational impacts to two issues: (1) the physical

deterioration of existing recreational facilities, or (2) the project's inclusion or expansion of recreational facilities that might have an adverse effect on the environment. An EIR's analysis with respect to recreation must focus on the impacts to the physical environment.

CEQA Focuses on the Physical Environment

Impacts on recreation can be considered in an EIR if they result from environmental impacts. Furthermore, impacts on recreation can cause environmental effects that must be analyzed in an EIR. The analysis in an EIR, however, must look at the intent behind CEQA, which is analyzing and informing decisionmakers and the public of the proposed project's potential to cause adverse changes in the physical environment.

Here, SWRCB is the lead agency requiring preparation of an EIR because the project may have a significant effect on the environment. (Pub. Resources Code, § 21100.) In this context, "any significant effect on the environment shall be limited to substantial, or potentially substantial, adverse changes in physical conditions which exist within the area . . ." (Pub. Resources Code, § 21100, subd. (d).) Pursuant to CEQA, the significant effects in this EIR must be limited to adverse changes in physical conditions. Thus, identifying and mitigating effects of this project on recreational boaters should not be the focus of this EIR.

The effects of the proposed project on recreational boaters could be considered a social impact, which may be discussed in the EIR. This social impact by itself, however, cannot be considered a significant effect on the environment. (CEQA Guidelines, §§ 15064, 15131, 15382.) The EIR "may trace a chain of cause and effect" by anticipating the economic or social changes resulting from the project that will then cause physical changes. The economic or social changes do not need to be described in any more detail than necessary to trace the cause, and effect and "[t]he focus of the analysis shall be on the physical changes." (CEQA Guidelines, § 15131, subd. (a).) In addition, "[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project." (CEQA Guidelines, § 15131, subd. (b).) For any project, however, economic and social changes resulting from the project should not be treated, on their own, as significant effects on the environment.

This EIR strongly emphasizes the effect of this project on boaters, whereas the proper emphasis should be on the effect to the physical environment. If the connection between the effect on boaters and the effect on the environment can be made, then the emphasis on boaters should only be made to the level of detail that exposes the environmental impact and its magnitude. Most important, mitigation measures must strive to reduce *environmental* impacts, not economic or social impacts.

Initial Study Incorrectly Identifies an “Impact” on Recreation

The Initial Study that led to this EIR is provided in Appendix A of the EIR. It responds to the environmental checklist form available in the current Appendix G of the CEQA Guidelines. Two questions are presented in the recreation section of the Initial Study:

- (1) “Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?” and
- (2) “Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?”

In the Initial Study, the answer to the first question appropriately declares that the project would not increase the use of existing parks, and thus, no impact results. The answer to the second question explains that the design being proposed “will allow the downstream passage of kayaks, canoes, and rafts” and that there exists a “potentially significant impact.” Moreover, according to the Initial Study, the design of the project that allows the downstream passage of boats is the “adjustable-crest diversion structure and boat/debris chute.” (Draft EIR, at p. S-5.) This information does not answer the question posed regarding the *environmental impacts* of the proposed project.

7-17

The Recreation Chapter of the Draft EIR does not explain how the project design that allows the downstream passage of boaters will result in a potentially significant impact on the environment. Instead of explaining how this special feature could create a potentially significant impact as the Initial Study indicates, however, the EIR discusses how the feature will be amenable to boaters and that the impacts are less than significant, requiring no mitigation. (See discussion of Impact 9-3, Draft EIR at p. 9-12.) Thus, the conclusion in the Initial Study that a potentially significant impact exists is contradicted by the discussion in the EIR by labeling it less than significant.

The Recreation Chapter of the Draft EIR primarily focuses on the diversion structure and how it impedes river navigation by recreational boaters. The “potentially significant” impact referred to in the Initial Study has been applied to the diversion structure and its potential impact to river navigation by boaters, rather than to the environmental impacts of the downstream passage of kayaks, canoes, and rafts. The discussion, therefore, does not match the information provided in the Initial Study. If the special feature designed to accommodate boaters would cause a significant effect on the environment, then mitigation

measures or alternatives targeted to this special feature need to be evaluated and discussed in the EIR. (See CEQA Guidelines, § 15126, subd. (c); see also *Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986, 995-996.) This analysis, however, is not provided in the Draft EIR.

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cont'd

Use of an Improper Baseline Causes Unfair Approach

In recognition of recreational boaters who have recently become accustomed to boating through this section of the River, SPPC anticipated the concerns that might arise with the re-building of its diversion dam in the design of the proposed project. The Draft EIR, however, appears to view these special features as mandatory and ignores the fact that special accommodation has already been made for boaters in the project design. The Draft EIR then suggests that more mitigation measures are necessary to accommodate boaters. CEQA does not support such a conclusion. SPPC will cooperate with other users of the River, but it also expects a balanced and fair approach to its proposal to rebuild the diversion structure.

7-18

The lack of a balanced and fair approach stems in part from the use of an improper baseline mentioned previously. The Farad diversion and power plant has been part of the River's environment since 1899. The diversion dam washed out in the January 1997 Flood and only since then have kayakers been able to "surf" on the old dam remnant and pass down the River without portage at Farad.

The use of an improper baseline also allows the EIR to avoid discussion of the Farad facility as an important historical resource. The Farad power plant and wooden flume constitute historical resources that provide "important examples of the major periods of California history . . ." (CEQA Guidelines, § 15065, subd. (a).) An EIR must focus on the environmental impacts, including historical impacts as mandated by CEQA, rather than on the expansion of recreational opportunities.

Mitigation Measures Should Focus on Reducing Environmental Impacts

Under CEQA, the lead agency must evaluate a project for its effect on the environment, particularly fish and other special status species, and not for its effect on recreational boaters. The increase in boating traffic and other recreational uses of the River, which this EIR promotes, could be detrimental to fish populations. Mitigation Measure 9-1, which requires SPPC to adjust river flows to accommodate boaters, and 9-2, which requires SPPC to provide access to boaters at the Farad Power Plant, increases the potential use of the river by humans. This could result in significant environmental impacts. (See CEQA

7-19

Guidelines, § 15126, subd. (c); see also *Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986, 995-996.)

In short, the EIR's focus on recreational boaters is on the wrong subject. Mitigation measures in the recreation chapter of this EIR focus on accommodating recreational boaters when the focus should be on the fish and other aquatic species. Again, CEQA mandates the disclosure and mitigation of the physical changes to the environment caused by the project, not on increasing recreational opportunities for the human population.

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Project Construction / Mitigation Measure 9-1

Under the Project Construction/Mitigation Measure 9-1, SPPC must provide a "rope, floating boom, or other appropriate equipment" to guide boaters "to a take-out location and the portage path or to allow them to scout the construction area for passage." Public safety is not ensured, however, by installing a rope or floating boom, as the mitigation suggests. Instead, ropes or floating booms actually create safety problems for boaters. Thus, this language and requirement should be eliminated. Upstream signs are sufficient to guide boaters.

7-20

SPPC is concerned with the safety of boaters on the river during construction. The project applicant will work in coordination with the blasting contractor as suggested in the mitigation measure and provide appropriate fencing as suggested. The requirement for a portage path, however, creates a problem.

Project Construction / Mitigation Measure 9-1 currently requires the project applicant to provide temporary portage during construction, with the portage path extending completely around the construction area. This mitigation measure is infeasible. The project requires a straight concrete wall adjacent to the freeway which provides the right bank of the temporary diversion channel. A portage path would need to cross the freeway to extend around the construction site. The intake structure will be under construction on the other side of the River. Thus, no safe area exists to walk around the construction site.

7-21

Instead of requiring the portage path, Project Construction/Mitigation Measure 9-1 should require take-out and sign provisions so that boaters do not enter the area. The boater take-out on river right currently used by CalTrans for the Floriston Bridge replacement should be used as a mitigation measure for the proposed project instead of providing a temporary portage around the site. A take-out on river left, which existed before the construction of the bridge replacement, will be replaced by CalTrans after construction is completed. Once this take-out is re-established, both take-outs will be available for boaters,

and signs would be placed upstream to warn boaters of the construction zone and the need to take out at these locations. If boaters continue down the River despite the signs and opportunities to take out, special construction features of the project will allow for their safe passage through the site.

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Recreational Weekend Flows / Mitigation Measure 9-1

Mitigation Measure 9-1 is Vague

Mitigation Measure 9-1 requires SPPC to “[m]aintain one weekend per month of recreational flows from April to September, when available.” As explained above, the impact that this mitigation measure is designed to reduce is inappropriate for this EIR, and the mitigation measure itself may have significant impacts on the environment. Nevertheless, if it were to be imposed upon SPPC, it would be impossible to implement because it lacks clarity.

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Mitigation Measure 9-1 requires SPPC to monitor weekend boating for a minimum of two years and determine whether the boating use exceeds a use level that results in “excessive crowding.” Monitoring to determine “excessive crowding” is a vague charge. How much monitoring must SPPC do? What constitutes overcrowding such that a second weekend of restricted flows becomes necessary? A mitigation measure must be fully enforceable (CEQA Guidelines, § 15126.4, subd. (a)(2)), and to be enforceable, it must be specific with regard to the applicant’s obligations. Here, the mitigation measure leaves SPPC wondering exactly how to interpret its wording. Furthermore, the Mitigation Measure restricting SPPC’s ability to divert water on account of recreational boaters impinges upon SPPC’s judicially decreed water rights.

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Mitigation Measure 9-1 has the Wrong Focus

The discussion under Mitigation Measure 9-1 focuses on the measure’s effect on anglers who may use the River, stating that “[b]ecause anglers are capable of using the Truckee River under a full range of flows, this mitigation would not adversely affect fishing opportunities, . . .” Again, this is not the point of an EIR. Instead of evaluating how the mitigation measure affects people who fish, the EIR should be evaluating how the mitigation affects the fish.

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Mitigation Measure 9-1 is Infeasible

Besides the lack of clarity and the inability to enforce, this particular mitigation measure is infeasible. *Feasible* is described in CEQA as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.” (Pub. Resources Code, § 21061.1.) The cost of Mitigation Measure 9-1 dictates that it should be eliminated.

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Mitigation Measure 9-1 requires SPPC to prevent diversion of water and adjust river flows to accommodate boaters for one weekend per month from April to September, which will cost an estimated 20 days of power generation. This creates an approximate annual power generation loss of 1,248 MW hours. If SPPC must adjust flows for a second weekend per month, a total of 2,496 MW hours per year will be lost.²

Cost to the Environment – Negative Impacts for Fish and Other Aquatic Species

As explained by fisheries engineer Jay Kidder of Chinook Engineering (see Attachment B), changing river flows to accommodate boaters would be at the expense of the fish and other aquatic species. When and if Lahontan Cutthroat Trout arrive in the specific reach of the River affected by the project, their spawning period is April 15 to July 15, while spawning for Rainbow Trout is April 1 to June 30.³ Flow fluctuations are harmful to spawning, but also harmful to fry and fingerling fish. Thus, the applicable months for the mitigation measure requiring weekend flows for boaters would correspond to the months that the fish are most vulnerable to river fluctuations. In addition, as the river flows decrease, the fluctuation in flows become more threatening for aquatic species.

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The requirement to artificially fluctuate river flows one weekend, and possibly two weekends, per month is a mitigation for the project’s impacts on boaters. This mitigation measure is not required under CEQA because the “impact” on boaters is not an

^{2/} This figure is based upon 20 days loss of full generation at 2.6 MW hours and represents the greatest possible loss. This assumes that the river maintains enough water April through September to accommodate full power production, and it assumes SPPC leaves an instream flow of 50 cfs. The annual loss of power if SPPC is required to maintain a minimum flow of 150 cfs would be 768 MW hours (one weekend per month recreational flow adjustment) and 1,535 MW hours (two weekends per month recreational flow adjustment).

^{3/} These spawning dates for Lahontan Cutthroat Trout and Rainbow Trout, along with the spawning dates for Brown Trout as explained in the attached letter from Jay Kidder of Chinook Engineering should replace the dates in the Draft EIR.

environmental impact. The mitigation measure, in fact, results in a potentially significant impact on fish and aquatic species, and should not be a requirement for SPPC's project. Again, SPPC has mitigated the impact on boaters with the original project design of the replacement dam. If Mitigation Measure 9-1 is not removed from the Final EIR, it should not be implemented during the spawning season, from April 15th to July 15th of each year.

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Cost to the Environment – Loss of Clean Generation of Electricity

This replacement diversion structure will provide power for an already-existing hydroelectric power plant. Although the technology is not new, it is still useful for the production of electricity today; some source of fuel needs to power the turbines that ultimately move electrons to create electricity for customers. Here, water moving at a high velocity provides the source of power that moves the turbines. Hydroelectric power is a clean, renewable source of energy.

Other types of power plants rely on other sources of fuel to generate electricity. These alternative sources include diesel, natural gas, or coal. Thus, the loss of electric generation from this already established hydroelectric plant will need to be replaced with other more polluting sources of power. The Farad power plant can provide 2.6 megawatts per hour. Replacing this electricity production with the alternative fuels would require the following for each MW hour: 80 gallons of diesel fuel, 10 million cubic feet of natural gas, or 840 pounds of coal. Thus, the annual cost in alternative fuels to adjust weekend flows for one weekend per month from April through September is 99,840 gallons of diesel fuel; 12,480 million cubic feet of natural gas; or 1,048,320 pounds of coal.

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previously
discussed

Preventing the generation of power in this already-existing hydroelectric plant would cause potential air quality impacts based on the likely replacement fuel for power generation elsewhere. Preventing the use of this existing power plant translates to the use of non renewable resources elsewhere in the grid. This result is harmful to the environment.

Moreover, restricting the generation of clean power contravenes California's efforts to increase clean power production. The California Consumer Power and Conservation Financing Authority, established by Governor Davis in response to California's electricity shortage, recognizes that "[o]ver the next 5 years California will need to add approximately 3,000 MW of clean power to meet the Governor's target of 17% of its supply being renewable." (California Power Authority website, <http://www.cpowerauthority.ca.gov/background/main.asp>.) In addition, Senate Bill 530 (Sher), which has been passed by the Senate, proposes amending Section 383.5 of the Public Utilities Code to read that "the intent of the Legislature . . . [is] to increase

the amount of renewable electricity generated per year, so that it equals at least 17 percent of the total electricity generated for consumption in California per year by 2006.” (See SB 530, last amended on 4/29/02.) A renewable electricity generation facility includes a hydroelectric facility generation of 30 MW or less, which would include the Farad Power Plant.

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Cost to SPPC

The fact that the power plant already exists and the fact that the loss of the dam in the 1997 flood was a covered loss⁴ makes the reconstruction of the dam, thus far, an economically feasible project. Nevertheless, the power plant must run at a capacity that generates enough electricity to justify its maintenance and the cost to adequately operate it. Otherwise, the project becomes economically infeasible. Using a price of six cents per kilowatt hour, for example, the annual cost of providing recreational weekend flows, one per month from April through September, would be about \$75,000. This annual cost doubles if SPPC is required to accommodate boaters for two weekends per month. Mitigation Measure 9-1 is not feasible.

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Cost to the Community at Large

Furthermore, the loss in electric power generation is a cost to the community at large. In California this is an important issue. The State experienced significant power shortages for the first time in the year 2000, which resulted in high prices for the citizens of this State. The Legislature and the Governor have adopted and implemented measures to insure that Californians have an adequate supply of electricity. SPPC has clearly-established water rights to divert water for the generation of electric power. Furthermore, the “fuel” supply for hydroelectric generation is not subject to fluctuations in availability and the escalating costs associated with fossil fuels. The SWRCB should not require a mitigation measure that reduces electrical generation from this already-existing power plant in order to increase recreational boating opportunities. Such a mitigation measure works in direct conflict with the State’s efforts to protect electricity supplies.

7-29

Mitigation Measure 9-2 Should be Eliminated for Environmental and Safety Reasons

Mitigation Measure 9-2 requires SPPC to provide improved recreation access at the Farad powerhouse. This mitigation measure does not alleviate environmental impacts; in fact, it could create them. Increasing public access by providing parking for the public (i.e.,

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⁴ Note that SPPC insurance policy payments over the years were an investment.

vehicle access) has its own set of potential impacts. Mitigation Measure 9-2 is unnecessary from a CEQA standpoint because it does not reduce or eliminate an environmental impact caused by the project.

While the SWRCB has broad authority to implement conditions, it does so pursuant to Water Code section 1253 which allows it to grant permits to appropriate water. Thus, conditions imposed must be fashioned "as will best develop, conserve, and utilize in the public interest the water sought to be appropriated." (Wat. Code, § 1253.) There is nothing in the SWRCB's regulations, however, which allow it to impose such conditions outside of its appropriative rights authority in its capacity as a CEQA lead agency. (Cal. Code Regs., tit. 23, § 3720 *et seq.*) Thus, the SWRCB does not have the power, beyond that provided by CEQA itself, to require access as a lead agency under CEQA.

In addition, this mitigation measure conflicts with legal obligations SPPC currently has with CalTrans. The deed easement between CalTrans and SPPC provides that the gate on the access road shall remain locked unless for the purposes of "agriculture, logging and mining, and for inspection, maintenance, repair, construction and reconstruction of the . . . utility facilities." According to the agreement, the right to use the access shall be terminated if the gate is opened for any other purpose than those stated above. Thus, SPPC has a legal obligation to limit public access to its power plant.

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Furthermore, limiting public access makes sense from a safety standpoint. Making an isolated facility more accessible to the general public, particularly by encouraging vehicle access, poses more risk to public safety, both to the individuals who might try to vandalize or interfere with the power plant and to the public who depends on a reliable supply of energy.

Litter and trash problems also increase as an area is given more public access. Currently, some trespassing occurs on this property and trash already poses a problem at times. With increased use, more trash and litter will find its way to the area. Some sort of maintenance and litter control would become necessary. SPPC is in the business of power generation, not a provider of park or road maintenance service. Thus, Mitigation Measure 9-2 should be eliminated.

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Conclusion and Suggested Resolution

Project Construction / Mitigation Measure 9-1 should be replaced with the suggested wording provided above. Recreational Weekend Flows / Mitigation Measure 9-1 and Mitigation Measure 9-2 should be eliminated in the final EIR because they are inappropriate

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and unnecessary under CEQA. To satisfy the requirements of CEQA, the EIR must focus on significant impacts to the physical environment. The impacts to recreational boaters can be discussed in the EIR, but not as an environmental impact that must be mitigated. This EIR creates the risk that the mitigation measures will *cause* environmental impacts rather than decrease or eliminate environmental impacts.

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Instead of creating mitigation measures that require SPPC to accommodate and thereby increase the number of recreational boaters on the River, SWRCB should recognize that SPPC has accommodated boaters with its special design in the project itself, specifically, the adjustable-crest diversion structure and boat/debris chute. This design feature was not in place with the old Farad dam, and no other dam on the River contains such a feature. With this in mind, SWRCB should be satisfied that the proposed project accommodates boaters beyond the requirements of CEQA.

7-34

Pursuant to CEQA, the environmental impacts of this design feature should be the focus of the EIR discussion under recreation. According to the discussion in the EIR, the design feature will not cause a significant impact on the environment. (Draft EIR, at p. 9-12.) Thus, these Mitigation Measures are unnecessary.

The Final EIR should include a revised Recreation Chapter as suggested. The change and/or elimination of the mitigation measures would not require a recirculation of the EIR because no new significant environmental impacts are introduced. (Pub. Resources Code, § 21092.1; CEQA Guidelines, § 15088.5; see also *Laurel Heights Improvement Association of San Francisco, Inc. v. Regents of University of California* (1993) 6 Cal.4th 1112.)

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As we have discussed, the Draft EIR has treated impacts on beneficial uses, such as the boating interests, the same as if they were impacts on the environment. Although this approach is misguided, if SWRCB chooses to retain the significance determination in the Recreation Chapter in the Final EIR, we then suggest that SWRCB adopt a statement of overriding considerations. Public Resources Code section 21081 authorizes an agency to reject proposed mitigation measures or alternatives as infeasible. A lead agency can adopt a statement of overriding considerations as long as there is substantial evidence in the record that the benefits of the project outweigh its unavoidable adverse impacts. (See CEQA Guidelines, § 15093, subd. (b).) This comment letter, with its attachments, provides such evidence.

7-36

ALTERNATIVES (Chapter 14)

On page 14-5 of the Draft EIR under the heading "Aesthetics," the second sentence is confusing. Please revise or delete.

7-37

The Final EIR should provide more detail regarding the impacts of the No Project alternative. The Draft EIR mentions that the No Project alternative would allow conditions to continue that result in erosion and water quality problems (Draft EIR, at p. 14-6), but the loss of clean, renewable electric power generation is not mentioned. The Final EIR should clarify that unless the Farad Diversion is replaced, this working historic and cultural resource will be lost.

7-38

CONCLUSION

The Draft EIR penalizes SPPC for proposing a project that addresses many of the fish and recreation impacts in its design. Instead of recognizing the superiority of the proposed project over in-kind replacement, the EIR requires additional mitigation even where such mitigation is not warranted by CEQA. SWRCB should impose only those mitigation measures that are feasible and only when the impacts are actually significant impacts on the environment.

7-39

We appreciate this opportunity to express our concerns. We respectfully request that you also read and respond to the attached letters from our water and fisheries engineers, which include additional changes that need to be made in the Final EIR.

7-40

Very truly yours,

Mary E. Handel
for Osha R. Meserve

Enclosures: Attachment A
Attachment B
Attachment C

Comparison Table
Jay Kidder Letter
Richard McLaughlin Letter

Comparative Benefits of the New Diversion for the Farad Hydroelectric Power Plant

Built in 1899, the Farad Hydroelectric Power plant supplies enough clean energy to power approximately 2600 homes. It was the first hydroelectric plant to be built on the east side of the Sierra.

THE OLD FARAD DIVERSION:	THE NEW FARAD DIVERSION:
Bank erosion on river left	Will stabilize chronic bank erosion on river left and improve river water quality
Debris build up occurred in front of intake structure	Sweeping flow across intake structure prevents debris buildup
Retained 16,000 cubic yards of sediment	Will not trap sediment - Pool is self cleaning
Reduced river channel capacity (at old diversion site)	Will increase river channel capacity (at old diversion site)
12+ foot water elevation differential from upstream to downstream	At 1800 cfs, the natural pool (diversion pool post construction) will remain at the same elevation as it is currently (pre construction)
No Boater passage	Provides for safe Boater passage over the structure
No portage	Provides portage (contingent upon cooperation of CalTrans)
No fish screen	Incorporates a fish screen with fish return to the river
Fish passage limited to a vertical slot fishway	Mimics natural fish passage pathways
Poor fish attraction for fish movement	Design provides fish attraction and fish passage attraction

Prepared by Sierra Pacific Power Company

Response to Comment Letter Number 7

Response to Comment Number 7-1

Comment noted.

Response to Comment Number 7-2

It is unclear whether the commentor is suggesting that the Farad Diversion Dam is a replacement project that is exempt from CEQA under Guideline § 15302. This provision provides a categorical exemption for replacement or reconstruction of existing structures or facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. The exemption is not applicable, in part, because the new diversion dam will not be located on the same site as the previous structure.

Guideline § 15021(a)(2) imposes a duty on the SWRCB not to approve a project as proposed if there are feasible alternatives or mitigation measures that would substantially lessen any significant environmental effects. The project features are intended to minimize environmental impacts are described in detail in Section 2.6 (Alternative A: Proposed Project). As discussed in the draft EIR and herein, while the project design mitigates some potential environmental effects, other significant environmental effects can only be avoided or reduced through additional mitigation.

Response to Comment Number 7-3

Comment noted. The SWRCB will review and consider the information in the Final EIR, including the comments it has received, before deciding whether or how to approve the project on its merit.

Response to Comment Number 7-4

In general, an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published. Although a lead agency has the discretion to identify a different baseline, this environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

An additional baseline will not be analyzed in this EIR. While historic conditions may provide a relative comparison, the SWRCB determined that the existing environmental conditions provide the appropriate baseline when evaluating the environmental impacts associated with the project. The previous diversion dam was located upstream from the proposed project site and has not existed for over 5 years. A comparison of pre-1997 conditions has limited value in assessing the environmental impacts of the proposed project on the existing environment. Please also see response to comment 7-5.

Response to Comment Number 7-5

Comment noted. The fact that a prior diversion existed on the river for nearly 100 years is disclosed in section 1.1 (Project Background). Although the

proposed project provides environmental advantages over the earlier diversion dam, the SWRCB must assess the impacts of the proposed project and alternatives on the existing environment rather than assess the relative benefits of the old and proposed diversion dams to each other. The preferred table will not be integrated into the EIR because it makes comparisons that are not analyzed in the EIR.

Response to Comment Number 7-6

Comment noted. The EIR focuses on environmental impacts, which includes analyses of the proposed project's impacts on water quality and water quality standards. This will be discussed further in other responses to this letter.

Response to Comment Number 7-7

The impacts of the proposed recreation mitigation measures are analyzed within the text following the mitigation measure, in the Final EIR (Recreation page 9-9). The potential impacts from whitewater boating flows have been disclosed, and additional monitoring has been added to Mitigation Measure 9-2 and 6-5, and Mitigation Measure 9-3 has been added, which if implemented, will eliminate impacts created from Mitigation Measure 9-2.

Response to Comment Number 7-8

Comment noted. The SWRCB recognizes that Appendix D is a preliminary restoration plan and only contains design recommendations. The general type of restoration proposed in the plan, while not required as mitigation for project effects, serves to enhance vegetation and wildlife habitat in the construction area. A final restoration plan will be required prior to construction.

Response to Comment Number 7-9

Table 4-1, page 4 of 8 indicates that the operational effects of the project may help stabilize the river banks and reduce the discharge of materials that may cause elevated suspended sediment loads. This is also described under the hydrology section no-project analysis, page 14-6. This beneficial effect was not further quantified in the EIR.

Response to Comment Number 7-10

Please see Master Response Fish 3. The available information supports a determination that a minimum flow of 150 cfs meets the physical habitat requirements for maintaining fish in good condition. Both DFG and USFWS support this flow and DFG indicated in its comment letter that lower flows would result in adverse effects on aquatic resources. The SWRCB would consider different bypass flows only if future studies support a determination that different bypass flows would mitigate impacts on aquatic resources.

Response to Comment Number 7-11

Although SPPC has bypassed 50 cfs for fish in the past, the available information supports the conclusion that a minimum flow of 150 cfs, not 50 cfs, meets the physical habitat requirements for maintaining fish in good condition.

Regardless of the bypass mitigation imposed, the environmental effects associated with finding replacement power are too uncertain and speculative to

adequately analyze. For example, there may be fewer environmental effects if another source of power such as wind power is used or an equivalent amount of power is conserved. If coal, natural gas, or diesel fuel are used, there may be air quality effects that do not occur under the proposed project.

Also, there is insufficient information available regarding potential generators of replacement energy to allow an informed analysis. The size, type, and location of prospective generators are unknown. Generation capacity may be filled by more than one generator and generators of different types. The generators may be located anywhere in the western United States where power is available to be supplied to the California market. The size and type of generator utilized would affect the analysis of potential construction and operational impacts, as well as the type and potential amount of air pollution produced, if any.

Response to Comment Number 7-12

Please see Master Responses Recreation 1 and Fish 4. If SPPC implements Mitigation Measure 9-3, any impacts to fish and wildlife would be mitigated and power generation would be unaffected. To evaluate potential impacts to fish and other aquatic species Mitigation Measures 9-1 and 6-5 have been modified to include additional monitoring.

Response to Comment Number 7-13

The project is an improvement over the previous facility with respect to boat, debris, and fish passage, but the environmental effects of the proposed facility must be compared against a baseline of existing conditions at the time of the NOP. The analysis focuses on construction and operational effects within both the construction and operation areas, and addresses boaters and boating opportunities. Information from Richard McLaughlin's letter will be added on flow changes with respect to recreation usage and will be added to Impact 9-4. The new play wave provides a recreational opportunity that is acknowledged in the Final EIR, but on the whole, flow reductions for power generation would substantially reduce recreational opportunities in the reach of the Truckee River between Floriston and Farad. See Master Response Recreation 1 for changes in the mitigation and designed to compensate for project effects.

Response to Comment Number 7-14

The project's design features are identified in Section 2.6.1.9 and 9.4.2, and are analyzed throughout the Draft EIR for impacts on the environment. Recreational boating is an activity that is dependent upon the physical characteristics of the Truckee River. A change in flow or in the manner in which the river flows changes the recreational experience. In evaluating whether the impairment of river flows resulting from project operations should be considered a significant impact on the environment, the SWRCB considered water quality impacts, including possible violations of water quality standards. Water quality standards include beneficial uses such as recreation. Thus, the project may have a significant effect on the environment if the project operations sufficiently reduce river flows to adversely affect recreation as a beneficial use and thereby violate water quality standards.

Moreover, the environmental effect associated with the project is a reduction in flows compared to the baseline condition. As an additional means of evaluating the significance of the physical environmental changes due to project operations (i.e., impaired flows), the SWRCB relied on an approach similar to that of CEQA Guideline 15131(b), which states that “economic or social effects of a project may be used to determine the significance of physical changes caused by the project.” (EIR, p. 9-13; see also Guideline § 15064(e).) Under this approach, the SWRCB considered impacts on recreational use in determining the significance of the physical change, i.e., a reduction in flows. In other words, by evaluating the change in recreational opportunities, the SWRCB was able to determine the significance of the physical changes caused by the project.

The mitigation measures address flow rates and diversion timing to ensure that the environmental effects and effects on beneficial uses are minimized. Please also see response to comment 7-13.

Response to Comment Number 7-15

Please see responses to comments 7-13 and 7-14.

Response to Comment Number 7-16

The determination of impact significance was not based on the previous Appendix G of the CEQA Guidelines. Current Appendix G is a model checklist for the preparation of an initial study. It provides a standard approach to project impact analysis, but is not intended to be the sole approach, particularly where the conditions pertinent to the project warrant a diversion from that standard.

The significance criteria provided thresholds to evaluate the physical environmental effects of the project. The project’s effects on downstream flows in the operation area were determined to have a significant effect on the environment when compared with existing conditions. For example, if existing in-stream flows are 485 cfs these flows would be reduced to 60-cfs in the operation area. These flow reductions would adversely affect aquatic resources and other beneficial uses (i.e., recreation) identified in the Basin Plan. Master Response Recreation 1 identifies the proposed new mitigation measure that would ensure aquatic resources and the beneficial uses are not adversely affected. Please also see response to comment 7-14.

Response to Comment Number 7-17

One of the purposes of an initial study is to assist the lead agency in determining whether the project may have a significant effect on the environment and whether an EIR must be prepared. The initial study is not expected to provide a full analysis of project impacts. Upon further review and analysis of the project during the preparation of the Draft EIR, the SWRCB determined that the physical effects on the environment are tied both to construction and operation, i.e., the structure itself and the reduction of flows in the Truckee River. The environmental effects associated with recreational passage are analyzed in Impact 9-1 “Change in Recreation Opportunities During Project Construction,” Impact 9-3 “Change in Boat Passage Resulting from Project Implementation,” and Impact 9-4 “Impairment of Flows Affecting Designated Beneficial Uses (Change in Recreational Boating Opportunities During Project Operation).” As a

result, no impacts were excluded from analysis. Please also see response to comment 7-14.

Response to Comment Number 7-18

The SWRCB as the lead agency has the discretion to select the baseline and has determined that the existing conditions are the appropriate baseline. Please see response to comment 7-4 and 7-5. The cultural resources associated with the project are also thoroughly and adequately analyzed in Chapter 10, as required under CEQA.

Response to Comment Number 7-19

Mitigation Measure 9-1 “Maintain 1 weekend per month of recreational flows from April to September, when available” has been revised. Please see Master Response Recreation 1. Mitigation Measure 9-2 “Create improved recreation access at the Farad powerhouse” has been deleted. Please see response to comment 7-30.

Response to Comment Number 7-20

Language was changed: “~~A rope, floating boom~~ Floating buoys or other appropriate equipment...” The rope or floating boom requirements were removed from this mitigation measure for safety reasons.

Response to Comment Number 7-21

The EIR previously stated that portage would be provided during construction. However, because there are limited access opportunities around the construction site and because of safety concerns during construction, portage cannot be provided. Boaters will be able to navigate through the by-pass channel during construction. In addition, construction work is temporary and will occur during periods of low run-off, when boating opportunities are limited in this reach. In the context of other boating and fishing areas along the Truckee River and due to the small size of the construction area, restricting access during construction is not expected to result in a significant adverse effect on recreational opportunities.

Response to Comment Number 7-22

This mitigation would only be implemented in the event that the new mitigation is unsuccessful. Please see Master Response Recreation 1. In the event it needs to be implemented, the SWRCB believes it is sufficiently clear and feasible. The mitigation is very specific about when diversions are allowable and when they are not. There may be times between April and September, when flows are 399 cfs and below that the weekend recreation boating is not provided and SPPC can continue to generate. Similarly, during high spring runoff greater than 1,700 cfs SPPC can continue to generate a partial load (i.e., from one turbine) as long as they do not divert 1,500 cfs (the optimal flow) in the bypass reach for the specified recreation weekend to allow for recreational use.

Response to Comment Number 7-23

Excessive crowding could be determined by standard scientific recreational survey methods. Possible methods include usage counts (video or manual) and questionnaires in the vicinity of the diversion.

Recreational flow requirements do not infringe on SPPC's judicially decreed water rights as outlined in Section 4.2.3.1.2, "Water Quality Certification". As stated on page 4-10 of the draft EIR "The SWRCB may impose water quality conditions, including instream flow requirements, requiring the applicant to operate the project consistent with designated beneficial uses or as necessary to implement the state's antidegradation policy."

Response to Comment Number 7-24

Aquatic resources, including fishing opportunities, are maintained by implementation of Mitigation Measures 6-2, 6-3 and 6-4. Impacts on aquatic resources were fully evaluated beginning on page 6-12 of the Draft EIR.

Response to Comment Number 7-25

Please see response to comment 7-23. Though this mitigation may be expensive to the applicant, the SWRCB is also chartered to protect the water quality and beneficial uses of the state. This mitigation represents one way to protect beneficial uses.

Response to Comment Number 7-26

Please see Master Response Fish 4. The fish spawning periods have been modified in the Final EIR (Appendix A).

Response to Comment Number 7-27

Please see response to comment 7-11.

Response to Comment Number 7-28

Please see response to comment 7-22 and 7-25.

Response to Comment Number 7-29

The SWRCB recognizes the need for power generation and utilizing pre-existing facilities, but it has a responsibility to ensure that the discharge will comply with water quality standards. The SWRCB will review and consider the information in the Final EIR, including the comments it has received, before deciding whether or how to approve the project on its merit.

Response to Comment Number 7-30

Mitigation Measure 9-2 "Create improved recreation access at the Farad powerhouse" has been deleted because of the potential public safety effects and SPPC's legal obligations with Caltrans.

Response to Comment Number 7-31

Please see response to comment 7-30.

Response to Comment Number 7-32

Please see response to comment 7-30.

Response to Comment Number 7-33

Please see response to comment 7-15.

Response to Comment Number 7-34

Please see response to comment 7-15.

Response to Comment Number 7-35

Please see response to comments 7-13 and 7-15. Recirculation was considered but determined unnecessary as described in Chapter 1 of the Final EIR.

Response to Comment Number 7-36

The mitigation measures are feasible as described in response to comments 7-22, 7-23, and 7-25.

Response to Comment Number 7-37

The sentence was revised as follows:

Changes in views of the project construction area resulting from implementation of Alternative B would be similar to those of the proposed project, except that the structural components associated with project implementation would be located approximately 750 feet downstream of at the old diversion site. Therefore, this alternative, and would not require the use of a diversion conduit.

Response to Comment Number 7-38

No additional analysis of the no project alternative is required. The purpose of the no project alternative analysis is to compare the proposed project's impacts with the impacts of not approving the proposed project. The level of detail in the alternative analysis is not required to be as great as that applied to the project. On page 14-6 of the draft EIR the hydrology section indicates that "existing conditions will continue to result in erosion on river left." The potential loss of a cultural resource is identified on page 14-7. As discussed in response to comment 7-11, the air quality effects of alternative sources of power generation are unknown and speculative were this energy facility not to be replaced.

Response to Comment Number 7-39

While the design is an improvement over the previous facility, the SWRCB has analyzed it against the baseline of existing conditions. The proposed mitigation measures serve to avoid, minimize, or mitigate the environmental effects of the project.

Response to Comment Number 7-40

Responses to comments have also been prepared to the attached letters (see response to comment letter numbers 8 and 9).



May 9, 2002

CHINOOK ENGINEERING
860 WINDROSE DRIVE
COUPEVILLE, WA 98239-3539

Craig W. Williams, P.E.
Staff Engineer
Sierra Pacific Power Company
6100 Neil Road
P.O. Box 10100
Reno, NV 89520-0024

Subject:

**Sierra Pacific Power Company
Farad Diversion Replacement Project
Comments to the
Draft Environmental Impact Report**

Dear Craig:

Please find enclosed my comments to the draft Environmental Impact Report (EIR). It is my opinion that the Jones and Stokes team has captured the intent of the project and has written an excellent description of the components and important aspects of the designed project.

I've organized my comments into two sections. The first section is a general discussion of the described project in the draft EIR. The second section, includes specific comments related to the various mitigation and suggested reasoning presented for certain components of the project.

If you have any questions please feel free to call me at my office at 360-678-4747.

Sincerely,

Jay S. Kidder, P.E.
Principal

encl:

Digitally signed by Jay S. Kidder
cn=Jay S. Kidder, o=Chinook Engineering, c=US
Date: 2002.05.10 11:41:35 -08'00'
Reason: I am approving this document

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CONSTRUCTION MANAGEMENT

DESIGN



American Fisheries Society

General Discussion

The Jones and Stokes team has assembled a good description of the project. There are however, certain minor errors and omissions in the description.

One important omission that has been overlooked is, the drawings currently submitted with the Environmental Impact Report (EIR) are not up to date. The drawings of the fine plate fish screen shown in the off channel sedimentation area do not show the V-shaped configuration. They should be corrected to show the final design arrangement including the location of the fish return pipe. The figures I note incorrect are; S-1, 2-2, and 2-6.

8-1

On page 2-6, Section 2.6.1.4, the description of the roughened channels state that fish passage flows ranged from 50-6,000 cfs as measured at the Farad gage. This should be changed to include flows in excess of 10,000 cfs and "well beyond desirable fish migration flows experienced on the Truckee River in this reach".

8-2

On page 2-7, Section 2.6.1.5, the description of the fine plate fish screen is also very well prepared. I don't believe that the USFWS has the final say as to the arrangement, location and the design approval of this screen, but rather the California Department of Fish and Game has that authority. The design criteria and guidelines were indeed those adopted by the Southwest Region of the National Marine Fisheries Service (NMFS).

8-3

Specific Comments

Information Sources

Information sources do not include reference correspondence between Sierra Pacific Power Company, the design team, and CDFG. This correspondence was not requested and was not publicly available; however, it does provide a more accurate indication of fish age and timing of various lifestages present or planned to be present in the future in this reach of the Truckee River, i.e. the Lahontan cutthroat trout. The lifestage chart developed in conjunction with John Hiscox, the Regional Habitat Biologist with CDFG is attached for reference.

8-4

Life History of the Lahontan cutthroat trout

In Section 6.2.2.2.2, the life history and timing of the various lifestages of the Lahontan cutthroat trout found in the Farad reach is incorrectly reported. As supplied from John Hiscox, the timing for spawning is April 15 to July 15 not as stated April to July. Incubation as defined by the time of egg placement until emergence and runs from April 15 to August 15. (The chart notes this period to start May 15) Please note that the young of the year are therefore present June 15th on until the young fish are classified as juvenile growing as stated and depending on water temperature and food 50mm to 150mm per year. Young of the year and juvenile fish are always present if they are established in this reach.

8-5

Life History of the rainbow trout

In Section 6.2.2.3.2, the life history and timing of the various lifestages of the rainbow trout found in the Farad reach is incorrectly reported. As supplied from John Hiscox, the timing for spawning is April 1 to June 30 not as stated July to early August. Incubation as defined by the time of egg placement until emergence and runs from April 1 to August 1. (The chart notes this period to start May 1) Emergence may start as early as Jun 15th. Please note that the young of the year are therefore present June 15th on until the young fish are classified as juvenile. Young of the year and juvenile rainbow trout are always present in this reach.

8-6

Life History of the brown trout

In Section 6.2.2.4.2, the life history and timing of the various lifestages of the brown trout found in the Farad reach is incorrectly reported. As supplied from John Hiscox, the timing for spawning is December 1 to February 1 not as stated November to December. Incubation as defined by the time of egg placement until emergence and runs from November 20th to as late as April 5. Emergence may start as late as June 15th. Please note that the young of the year are therefore present June 15th on until the young fish are classified as juvenile. Young of the year and juvenile brown trout are always present in this reach.

8-7

Please see the Lifestage chart for the Lahontan mountain sucker or the mountain whitefish as required.

Instream Flows

On page 6-9, Section 6.3.1.1 Flow Assessment, references are made to the river flow required for "preferred in-stream flows". The resultant in-stream flow requirement is based on CDFG reports that were prepared using the widely accepted Physical Habitat Simulation computer model. The referenced model, *Instream Flow Requirements, Truckee River Basin, Lake Tahoe to Nevada, CDFG, 1996* was prepared for the rainbow and brown trout species particularly. The suitability curves and resultant flow versus wetted usable area curves are developed for non-endemic species and therefore do not specifically address the requirements of the Lahontan cutthroat trout. The development and application of specific LCT requirements will eventually be required under the Endangered Species Act (ESA) before any conclusions of flow requirements are made and could be completed outside this forum.

8-8

It is a far stretch to apply the flow requirements for an eastern U.S. fish (brown trout) and coastal rainbow trout broadly onto the needs of the Lahontan cutthroat trout. After all, the Lahontan cutthroat trout (LCT) have adapted to the Truckee River basin and its hydrology for thousands of years, and what is good for the rainbow and brown trout may not be satisfactory for the LCT. The IFIM also did not specifically look at the details of the diversion reach and should include the particulars of this reach as a study of its own if it is to be used to regulate the diversion reach between the diversion intake and the Farad powerhouse. There is also no indication of the location of the transects in the study reach pertaining to the Farad Diversion Replacement and it is therefore impossible to ascertain if the results should apply to the

specific reach for the rainbow trout or the LCT. What about the other species present as well, such as the mountain whitefish for example?

It is my opinion that eventually a modified management approach that includes the restored LCT in the Farad Reach is needed. A future detailed IFIM could recommend a minimum or optimum river flow that must be species specific and conclude, given the interests of the LCT Recovery plan, with a determined amount of flow needed for the LCT. An IFIM that determines the requirements for the LCT, including specific habitat suitability curves for various lifestages must be completed after the diversion replacement occurs and as the recovery of LCT in the Farad Reach comes to fruition. The 150 cfs of river flow may be presently acceptable for the rainbow and brown trout, but not necessarily for the target species of the LCT recovery plan into the future. It is possible that the 150 cfs of river flow may actually be higher than the historical flows of the unregulated natural Truckee River at certain critical times of development for the LCT. It may in fact be detrimental to certain lifestages of the LCT in this reach. That is to say there may be a conflict that is not obvious given the level of detail of the referenced study.

8-8
cont'd

I don't recommend preparing a revised IFIM at this time and believe that the referenced study is adequate for the current fisheries management objectives in place. It should be accomplished in concert with the LCT recovery in the future.

The subject IFIM report also notes that instream ramping of the rivers flows is not recommended. This will relate to comments to mitigation 9-1 below.

Aquatic Resources Impact 6-3 and Mitigation 6-1

Disruption of Movement of Adult and Juvenile Fish during Construction

As mentioned in the Mitigation 6-1, the temporary diversion channel will be constructed and operated so as to provide for fish passage during construction and until the river can be reestablished into its original channel. If during construction start and stop phases or as needed along the construction timeline, fish will be moved unharmed from potential stranding locations prior to dewatering.

8-9

I agree with the noted Mitigation 6-1.

Aquatic Resources Impact 6-5 and Mitigation 6-2

Mortality or Disruption of Movements, of Fish Caused Project Operation

Please include that the design, planning, development, physical modeling, and final design of the fish passage components of the Farad Diversion Replacement Project and the fine plate fish screen have been completed by staff at Chinook Engineering under contract to the Sierra Pacific Power Company.

8-10

I am in agreement with the Mitigation 6-2.

8-10
cont'd

Aquatic Resources Impact 6-6 and Mitigation 6-3
Aquatic Resources Table 6-3

Table 6-3 is based entirely on the referenced IFIM as noted in Instream Flows above. Until it is decided that the target species of design and instream flow requirements does or does not include LCT, Table 6-3 may be in conflict with the needs of future recovered LCT.

I recommend that eventually a specific LCT IFIM be completed and that Table 6-3 not be used in its current context that refers to the conclusion that 150 cfs river flow is the minimum acceptable for the diversion reach indefinitely.

8-11

If CDFG wishes to continue to manage the Farad Reach on the basis that rainbow and brown trout are the target species then the minimum flow of 150 cfs may be acceptable based on the completed IFIM. The 150 cfs river flow may also be too high for the LCT at certain times of year and it should be precisely managed because of the limited total water storage available in the watershed.

Aquatic Resources Impact 6-8 and Mitigation 6-5

Stranding of Fish and Invertebrates as a result of Flow Fluctuations During Project Operations

Mitigation 6-5, Limit the Magnitude and rate of flow fluctuations that are under control of the operator

This impact is a real one if the river flow is fluctuated faster than aquatic species are able to react. The river stage is affected by changes in flow rate. The stage change of the river and the corresponding waterline change along the shoreline of the river are what affect the aquatic organisms causing a potential for stranding. The most vulnerable organisms to this type of impact are the highly mobile fry and fingerling fish. In addition to fry stranding, dewatered redds can result from flow ramping during the spawning season of the many aquatic species present. Whenever ramping occurs, it is imperative to assure that high flows do not attract spawners into areas that will subsequently be dewatered and desiccated later.

8-12

Small fish are extremely vulnerable to stranding along the shoreline due to a fast fluctuating river. The salmonid fry are most often associated with the fringe shoreline where they inhabit warmer water and feed in suitable water velocities. The early rearing stage of their life mandates that they inhabit the near shore areas that make them vulnerable to stranding.

Artificial ramping in any way is not good for the aquatic organisms. The potential for stranding fry and juveniles is high. Ramping of the operation should be kept to a minimum and only in the case of emergency and once or twice annually for planned maintenance. It should be accomplished during times of high river base flow if possible so that the percentage of river flow change relative to the background flow rate is minimized. During times when flows in the

diversion reach are minimal the ramping up and subsequent down ramp may be on the order of double the river flow in the diversion reach. If possible this should be avoided because of the extreme in the distance of movement of the shoreline habitat for any given change in stage over a time period.

The referenced Washington State Department of Fisheries Technical Report 119, by Mark Hunter notes that for salmonid in Washington State in general from February to June 15th no daylight down ramping is allowed and during the night the maximum down ramp rate in vertical river stage is 2" per hour. During the time period of June 16 to October 31 the maximum rate is even less at 1" per hour. That is to say that for any given river cross section, both wide and shallow or narrow and deep, the river cannot drop more than 2" or 1" per hour. Given the variable geomorphology of the Farad Reach of the Truckee River there is some governing cross section that will exhibit the greatest stage change for any given change in river flow and as the EIR states this is difficult to ascertain without great study effort.

Additional work discussed by Pflug (1989 and 2002) in his work on the Skagit River suggests that a more valid ramp rate should be established using the speed at which the shoreline moves along the gravel bar or river bed. This should be limited to 3-5 feet per hour and is established along the distance of the sloping riverbed or gravel bar that is being dewatered. He also notes that juvenile salmonids are extremely vulnerable to stranding when waterlines are fluctuated faster than this rate during aggressive down ramp rates. How this relates to the ramp rate of the Farad Reach would have to be determined by study and modeling.

8-12
cont'd

During snowmelt periods of the spring time, diurnal flow fluctuations can occur that are effectively mini up and down ramps. These are not controlled and are flow fluctuations that are slower in rate change than the artificial events discussed above. These fluctuations are on the order of less than 250 cfs per day near Farad thus about 10 cfs per hour.

Early rearing and juvenile lifestages are known to be present during all times of the year in the Farad Reach. For this reason I agree that the ramping rate of the operation of the river flows should be kept to the criteria noted in Mitigation 6-5 and that if possible verification of the water line speeds along the shore should be determined to maintain it below the 3-5 feet per hour during down ramping.

Mitigation 6-5 and Mitigation 9-1 are in conflict with each other. I recommend that the river not be ramped for the purpose of recreational boating.

Mitigation 9-1

The ramping rates outlined in the Mitigation 6-5 above should be adhered to for that impact.

To apply the idea of an operational ramp rate for recreational boating desires trades the damages to the aquatic resources, some of which are endangered species, for recreational boating. This is bad for the aquatic species and is not something that I agree with. The river should not be operated at the expense of the fish and other aquatic species.

8-13

As noted above ramping in a river is not something that is recommended. It is tolerated for maintenance. Ramping is frowned upon for other than necessary reasons. It would be prohibitive to operate the river with mimicked ramp rates that are similar to normal diurnal fluctuations. The young of the year and juvenile fish are present during the summer months that are suggested as the months to accomplish the ramping. This should not be carried out because of the impacts to the small fish caused by stranding.

Additionally, the total amount of water available in the watershed of the Truckee River is limited. If the use of the water for recreational requests is allowed, it creates an added water demand that may or may not be available considering all water rights in the basin. The recreational demand therefore competes with the aquatic resources for water during certain times of year.

8-14

The wording of this Mitigation is not clear. Where does the water to maintain the 1500 cfs come from when flows at the Farad gage are above 1700 cfs? What is a full flow of 400 cfs or 1500 cfs achieved by 8 a.m. on Saturday? Who decides what crowded boating is defined as?

This mitigation is not understandable as written and should be eliminated in my opinion.

References

Pflug, David E.. 1989. Skagit River Salmon and Steelhead Fry Stranding Study, Report Prepared by R. W. Beck and Associates, Seattle City Light, Environmental Affairs Division, Seattle, WA. 300 pages.

Pflug, David E.. 2002. Changes in the Distribution and Density of Salmon Spawning in the Upper Skagit River in Response to Flow Management Measures. Recently accepted for publication with the American Fisheries Society.

Attached Biography

JAY S. KIDDER, P.E.
PRINCIPAL, CHINOOK ENGINEERING

B.S. IN CIVIL ENGINEERING, 1984
B.S. IN FISHERIES BIOLOGY, 1980
UNIVERSITY OF WASHINGTON

QUALIFICATIONS

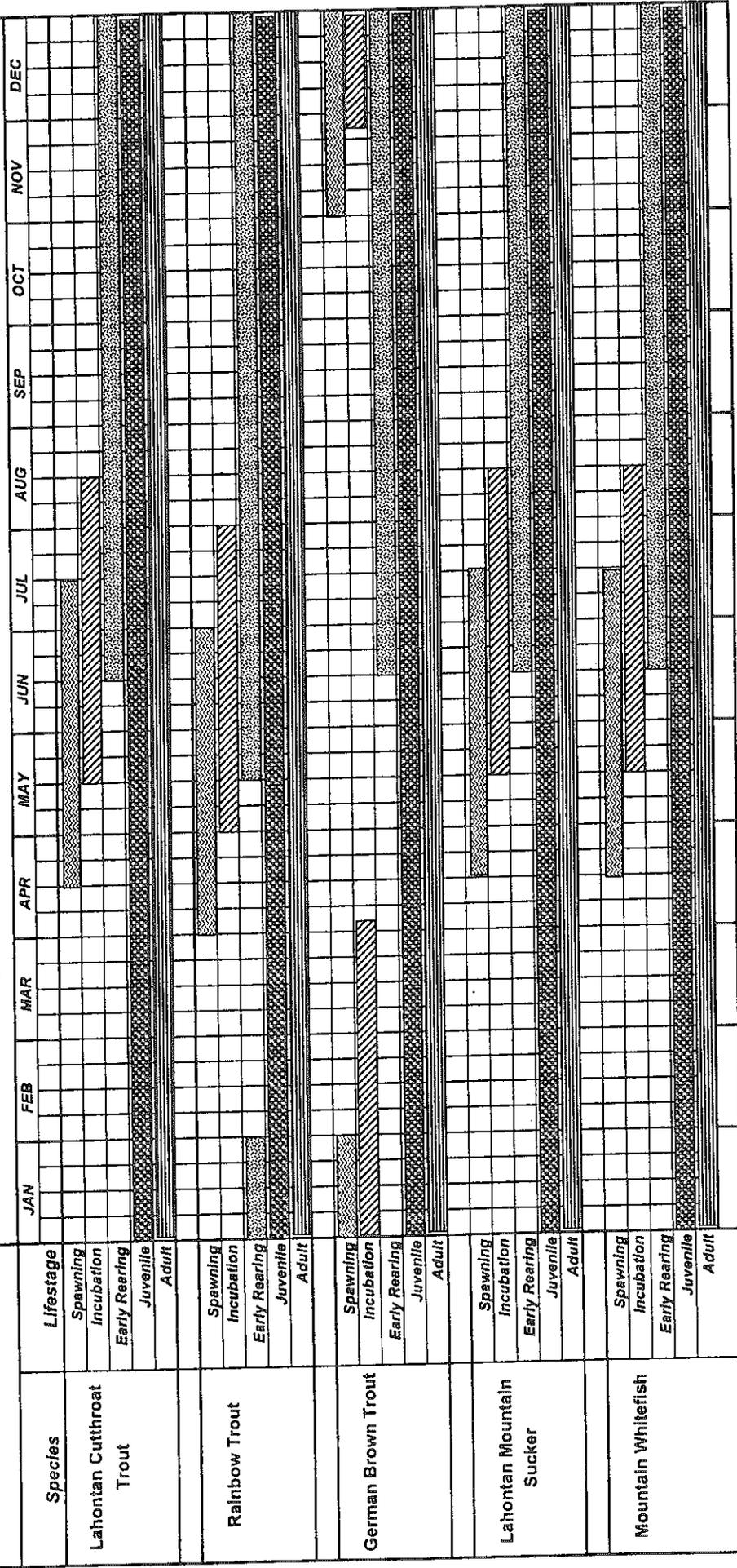
Mr. Kidder is a principal for the company he founded as an independent consulting engineer providing services to state and federal agencies, municipalities, private non-profit groups, Indian tribes, and private companies in the Pacific Northwest, Great Basin and Alaska. Mr. Kidder's skills include project planning, design, and construction management for salmon, steelhead, trout, and sturgeon fish facilities including hatcheries, fishways, screening facilities, velocity barriers and facilities unique to hydroelectric projects, dams other water resources uses. Mr. Kidder is experienced in all aspects of stream habitat restoration from planning, estimating, design, and construction management.

He is experienced in the analysis of fish passage through hydroelectric turbines and has completed several projects reviewing survival of fish passage at projects on the Columbia and Snake Rivers.

Mr. Kidder has just recently completed a complex design of a fish screening facility associated with the Farad Diversion on the Truckee River near Floriston, California. The off channel fish screen will provide protection for fry by using criteria as established by the National Marine Fisheries Service and as required for the future establishment and recovery of Lahontan cutthroat trout in the watershed. The project also included the design of an innovative fish passage method for the safe migration of fish over the multipurpose diversion. The multipurpose diversion includes characteristics making it safe for boaters to travel downstream while at the same time providing for fish passage upstream and still providing for the diversion of water directed to the Farad Hydroelectric facility. Innovations include roughened channel fish passage mimicking the shape and aspects of the Truckee River and blending that into the constructed diversion.

Mr. Kidder is a licensed professional Civil Engineer registered in the states of WA, AK, ID, OR, CA and pending in MT, and NV.

Lifestage Periods of Fish Occurring at Floristan, CA., Typical Year
as pertaining to the Sierra Pacific Power Company, Farad Diversion Replacement



Response to Comment Letter Number 8

Response to Comment Number 8-1

Figure 2-6 has been updated to reflect the most recent fish screen design.

Response to Comment Number 8-2

Change made.

Response to Comment Number 8-3

Change made.

Response to Comment Numbers 8-4 to 8-7

Appropriate corrections were made to the text regarding the timing of various life stages of Lahontan cutthroat, rainbow, and brown trout.

Response to Comment Number 8-8

Please see Master Response Fish 1. Mitigation Measure 6-3 has been revised to allow SPPC to request the SWRCB to review information developed in the TROA EIR/EIS on the instream flow requirements for LCT and other fish. The SWRCB may consider revising the 150 cfs bypass flow required under Mitigation Measure 6-3 if supported by studies constituting substantial evidence.

Response to Comment Number 8-9

Movement of fish to prevent stranding was added to Mitigation Measure 6-1.

Response to Comment Number 8-10

Comment noted.

Response to Comment Number 8-11

Comment noted. Please see Master Responses Fish 1 and Fish 2.

Response to Comment Number 8-12

Please see Master Response Fish 4.

Response to Comment Number 8-13

Please see Master Responses Fish 4 and Recreation 1.

Response to Comment Number 8-14

Please see Master Responses Fish 4 and Recreation 1. Water for boating is from natural flow in the river, and will not be drawn from storage. The only change in flow will be in the bypass reach for this project.